



Case No.: 09 – 1879 -EL-REN

A. Name of Renewable Generating Facility: Akron Biosolids to Energy Project Phase 1

The name specified will appear on the facility's certificate of eligibility issued by the Public Utilities Commission of Ohio.

Facility Location: Summit County, Ohio

Street Address: **2677 Riverview Road**

City: **Akron** State: **Ohio** Zip Code: **44313**

Facility Latitude and Longitude

Latitude: **41°N 9' 11.55"**

Longitude: **81°W 34' 7.92"**

There are internet mapping tools available to determine your latitude and longitude, if you do not have this information.

If applicable, U.S. Department of Energy, Energy Information Administration Form EIA-860 Plant Name and Plant Code.

EIA-860 Plant Name:

EIA Plant Code:

B. Name of the Facility Owner City of Akron, Ohio

Please note that the facility owner name listed will be the name that appears on the certificate. The address provided in this section is where the certificate will be sent.

If the facility has multiple owners, please provide the following information for each on additional sheets.

Applicant's Legal Name (First Name, MI, Last Name): **Richard Merolla**

Title: **Director of Public Service**

Organization: **City of Akron, OH Department of Public Service**

Street Address: **166 S. High Street**

City: **Akron** State: **Ohio** Zip Code: **44308**

Country: **USA**

Phone: **330-375-2270** Fax: **330-375-2100** Email Address: **MerolRi@ci.akron.oh.us**

Web Site Address (if applicable): **www.ci.akron.oh.us**

C. List name, address, telephone number and web site address under which Applicant will do business in Ohio.

Applicant's Legal Name: **Richard Merolla**

Title: **Director of Public Service**

Organization: **City of Akron, Ohio**

Please note that the company name will appear on the certificate

Owner's Address:

The address provided in this section is where the certificate will be sent

Street Address: **166 S. High Street**

City: **Akron** State: **Ohio** Zip Code: **44308**

Country: **USA**

Phone: **330-375-2270** Fax: **330-375-2100** Email Address: **MerolRi@ci.akron.oh.us**

Web Site Address (if applicable): **www.ci.akron.oh.us**

D. Name of Generation Facility Operating Company:

Legal Name of Contact Person: **Brian M. Gresser, P.E.**

Title: **Plant Administrator**

Organization: **City of Akron, Ohio**

Operator's Address:

Street Address: **2460 Akron-Peninsula Road**

City: **Akron** State: **Ohio** Zip Code: **44313**

Country: **USA**

Phone: **330-928-1164** Fax: **330-928-2285** Email Address: **GressBr@ci.akron.oh.us**

Web Site Address (if applicable): **www.ci.akron.oh.us/PubUtil/wpc/index.htm**

E. Contact person for regulatory or emergency matters

Legal Name of Contact Person: **Thomas F. Smith, P.E.**

Title: **Plant Engineer**

Organization: **City of Akron, Ohio**

Operator's Address:

Street Address: **2460 Akron-Peninsula Road**

City: **Akron** State: **Ohio** Zip Code: **44313**

Country: **USA**

Phone: **330-928-1164** Fax: **330-928-2285** Email Address: **SmithTo@ci.akron.oh.us**

Web Site Address (if applicable): **www.ci.akron.oh.us/PubUtil/wpc/index.htm**

F. Certification Criteria 1: Deliverability of the Generation into Ohio

Ohio Revised Code (ORC) Sec. 4928.64(B)(3)

The facility must have an interconnection with an electric utility.

Check which of the following applies to your facility's location:

- ☒ The facility is located in Ohio.
- ☐ The facility is located in a state geographically contiguous to Ohio (Indiana, Kentucky, Michigan, Pennsylvania, or West Virginia).
- ☐ The facility is located in the following state:

If the renewable energy resource generation facility is not located in Ohio, Indiana, Kentucky, Michigan, Pennsylvania, or West Virginia, you are required to submit a study by one of the regional transmission organizations (RTO) operating in Ohio, either PJM or Midwest ISO, demonstrating that the power from your facility is physically deliverable into the state of Ohio. The study may be conducted by someone other than the RTO provided that the RTO approves the study. This study must be appended to your application as an exhibit.

G. Certification Criteria 2: Qualified Resource or Technology

You should provide information for only one resource or technology on this application; please check and/or fill out only one of the sections below. If you are applying for more than one resource or technology, you will need to complete a separate application for each resource or technology.

G.1. For the resource or technology you identify in Sections G.4 – G.13 below, please provide a written description of the system. ***The City of Akron, Ohio operates a 75 million gallon per day wastewater treatment facility that generates biological solids (municipal sludge) as part of the treatment process. A portion of the municipal sludge is directed to a 5,000 dry ton per year anaerobic digestion system (ADS). The ADS process uses bacteria to generate biogas, which is used to fuel a 335 KWH engine-driven generator. Electric power from the generator is fed back into the facility for internal use. Heat from the engine is recovered and is used to support the anaerobic process.***

G.2. Please include a detailed description of how the output of the facility is going to be measured and verified, including the configuration of the meter(s) and the meter type(s). ***The generation output is measured by an electronic power metering system supplied by the engine-generator manufacturer, GE Jenbacher. The meter data is sent to the GE Jenbacher DIA.NE Engine Management System for display. The Power Control System is manufactured by B. HIRNSCHRODT Ges.m.b.H (BH Instruments, Austria) model no. PCS 511. See Exhibit I for the manufacturer's technical performance of the meter. The meter's CTs & PTs are installed on the output-side of the generator.***

G.3. Please attach digital photographs that depict an accurate characterization of the renewable generating facility. Please indicate the date(s) the photographs were taken. For existing facilities, these photographs must be submitted for your application to be reviewed. For proposed facilities or those under construction, photographs will be required to be filed within 30 days of the on-line date of the facility.

INSERT PHOTOGRAPH(S)



Akron Biosolids to Energy Project 5-20-2008



Akron Biosolids to Energy Project 5-20-2008



**Combined Heat & Power Unit (CHPU) Enclosure
5-13-2008**



CHPU Jenbacher Type 2 J208 GS 5-13-2008

The Applicant is applying for certification in Ohio based on the following qualified resource or technology (Sec. 4928.01 O.R.C.):

G.4 __ SOLAR PHOTOVOLTAIC

Total PV Capacity (DC):

Total PV Capacity (AC):

Expected Capacity Factor:

Capacity factor is the ratio of the energy produced to the maximum possible at full power, over a given time period. Capacity factor may be calculated using this formula:

*Projected annual generation (kWh or MWh) **divided by** [the nameplate capacity (in kW or MW) **times** 8760]*

Anticipated Annual output in kWh/yr:

Location of the PV array: __ Roof __ Ground __ Other

of Modules and/or size of the array:

G.4a PV Modules

For each PV module, provide the following information:

Manufacturer:

Model and Rating:

G.5 __ SOLAR THERMAL (FOR ELECTRIC GENERATION)

G.6 __ WIND

Total Nameplate Capacity (kilowatts AC): or kW DC:

Expected Capacity Factor:

Anticipated Annual Output in kWh/yr or MWh/yr:

of Generators:

G.6a Wind Generators

If your system includes multiple generators, please provide the following information for each unique generator you have in your system

Manufacturer:

Model Name and Number:

Generator Nameplate Capacity (kilowatts AC):

Wind Hub Height (ft):

Wind Rotor Diameter (ft):

G.7 __ HYDROELECTRIC ("hydroelectric facility" means a hydroelectric generating facility that is located at a dam on a river, or on any water discharged to a river, that is within or bordering this state or within or bordering an adjoining state (Sec. 4928.01(35) O.R.C.)

Check each of the following to verify that your facility meets each of the statutory standards (Sec. 4928.01(35) O.R.C.):

- ☐ (a) The facility provides for river flows that are not detrimental for fish, wildlife, and water quality, including seasonal flow fluctuations as defined by the applicable licensing agency for the facility.
- ☐ (b) The facility demonstrates that it complies with the water quality standards of this state, which compliance may consist of certification under Section 401 of the "Clean Water Act of 1977," 91 Stat. 1598, 1599, 33 U.S.C. 1341, and demonstrates that it has not contributed to a finding by this state that the river has impaired water quality under Section 303(d) of the "Clean Water Act of 1977," 114 Stat. 870, 33 U.S.C. 1313.
- ☐ (c) The facility complies with mandatory prescriptions regarding fish passage as required by the Federal Energy Regulatory Commission license issued for the project, regarding fish protection for riverine, anadromous, and catadromus fish.
- ☐ (d) The facility complies with the recommendations of the Ohio Environmental Protection Agency and with the terms of its Federal Energy Regulatory Commission license regarding watershed protection, mitigation, or enhancement, to the extent of each agency's respective jurisdiction over the facility.
- ☐ (e) The facility complies with provisions of the "Endangered Species Act of 1973," 87 Stat. 884, 16 U.S.C. 1531 to 1544, as amended.
- ☐ (f) The facility does not harm cultural resources of the area. This can be shown through compliance with the terms of its Federal Energy Regulatory Commission license or, if the facility is not regulated by that commission, through development of a plan approved by the Ohio Historic Preservation Office, to the extent it has jurisdiction over the facility.
- ☐ (g) The facility complies with the terms of its Federal Energy Regulatory Commission license or exemption that are related to recreational access, accommodation, and facilities or, if the facility is not regulated by that commission, the facility complies with similar requirements as are recommended by resource agencies, to the extent they have jurisdiction over the facility; and the facility provides access to water to the public without fee or charge.
- ☐ (h) The facility is not recommended for removal by any federal agency or agency of any state, to the extent the particular agency has jurisdiction over the facility.

G.8 __ GEOTHERMAL

G.9__ SOLID WASTE (as defined in ORC section 3734.01), electricity generation using fuel derived from solid wastes through fractionation, biological decomposition, or other process that does not principally involve combustion. (Sec. 4928.01(A)(35) O.R.C.)

Identify all fuel types used by the facility and respective proportions (show by the percent of heat input):

G.10 X BIOMASS (includes biologically-derived methane gas, such as landfill gas)

Identify the fuel type used by the facility: ***Methane gas generated from anaerobic digestion of municipal wastewater sludge.***

If co-firing an electric generating facility with a biomass energy resource, the proportion of fuel input attributable to the biomass energy resource shall dictate the proportion of electricity output from the facility that can be considered biomass energy.

G.10a List all fuel types used by the facility and respective proportions (show by the percent of heat input): ***100% biomethane***

G.10b Please attach the formula for computing the proportions of output per fuel type by MWh or kWh generated.

G.11 __ FUEL CELL (any fuel cell used in the generation of electricity, including, but not limited to, a proton exchange membrane fuel cell, phosphoric acid fuel cell, molten carbonate fuel cell, or solid oxide fuel cell; Sec. 4928.01(35)(A) O.R.C.).

Identify all fuel types used by the facility and respective proportions:

G.12 __ STORAGE FACILITY

If using compressed air or pumped hydropower, the renewable energy resource used to impel the resource into the storage reservoir is (include resource type and facility name):

H. Certification Criteria 3: Placed in Service Date (Sec. 4928.64. (A)(1) O.R.C.)

The Renewable Energy Facility:

☐ has a placed-in-service date before January 1, 1998; (month/day/year):

☒ has a placed-in-service date on or after January 1, 1998; (month/day/year): **10 / 16 / 2007**

☐ has been modified or retrofitted on or after January 1, 1998; (month/day/year):

Please provide a detailed description of the modifications or retrofits made to the facility that rendered it eligible for consideration as a qualified renewable energy resource. In your description, please include the date of initial operation and the date of modification or retrofit to use a qualified renewable resource. Please include this description as an exhibit attached to your application filing and identify the subject matter in the heading of the exhibit.

☐ Not yet online; projected in-service date (month/day/year):

H.1 Is the renewable energy facility owner a mercantile customer?

ORC Sec. 4928.01 (19) "Mercantile customer" means a commercial or industrial customer if the electricity consumed is for nonresidential use and the customer consumes more than seven hundred thousand kilowatt hours per year or is part of a national account involving multiple facilities in one or more states.

☐ No

☒ Yes

Has the mercantile customer facility owner committed to integrate the resource under the provisions of Rule 4901:1-39-08 O.A.C?

☒ No

☐ Yes

If yes, please attach a copy of your approved application as an exhibit to this filing.

I. Facility Information

The nameplate capacity of the entire facility in megawatts (MW): **0.335**

If applicable, what is the expected heat rate of resource used per kWh of net generation:
9,424.25 BTU/kWh

Number of Generating Units: **1**

I.1 For each generating unit, provide the following information:

In-Service date of each unit	The nameplate capacity of each unit in megawatts (MW)	Projected Annual Generation	Expected Annual Capacity Factor %
February 1, 2008	0.335	2,900 MWHs	98.8%

(To expand the number of rows if more units need to be reported, place your cursor in the bottom right cell and hit tab).

J. Regional Transmission Organization Information

J.1 In which Regional Transmission Organization area is your facility located:

☐ Within Geographic Area of PJM Interconnection, L.L.C.

☒ Within Geographic Area of Midwest ISO

☐ Other (specify):

J.2 Are you a member of a regional transmission organization?

☐ Yes; specify which one:

☒ No; explain why you are not a member of a regional transmission organization:

This is a behind the meter generation facility – 100% of power generated is consumed on-site.

J.3 Balancing Authority operator or control area operator for the facility:

☐ PJM

☒ Midwest ISO

☒ Other (specify): **American Transmission Systems, Incorporated, local balancing authority**

K. Attribute Tracking System Information

Are you currently registered with an attribute tracking system: ☐ Yes ☒ No

In which attribute tracking system are you currently registered or in which do you intend to register (*the tracking system you identify will be the system the PUCO contacts with your eligibility certification*):

☒ GATS (Generation Attribute Tracking System)

☐ M-RETS (Midwest Renewable Energy Tracking System)

☐ Other (specify):

K.1 Enter the generation ID number you have been assigned by the tracking system:

If the generation ID number has not yet been assigned, you will need to provide this number to the PUCO within 15 days of your facility receiving this number from the tracking system).

L. Other State Certification

Is the facility certified by another state as an eligible generating resource to meet the renewable portfolio standards of that state?

☐ Yes

☒ No

L.1 If yes, for each state, provide the following information:

Name of State	State Certification Agency	State Certification Number	Date Issued

(To expand the number of rows if more units need to be reported, place your cursor in the bottom right cell and hit tab).

M. Type of Generating Facility

Please check all of the following that apply to your facility:

- ☐ Utility Generating Facility:
 - ☐ Investor Owned Utility
 - ☐ Rural Electric Cooperative
 - ☐ Municipal System
- ☐ Electric Services Company (competitive retail electric service provider certified by the PUCO)
- ☐ Distributed Generation with a net metering and interconnection agreement with a utility.
Identify the utility:
- ☐ Distributed Generation with both on-site use and wholesale sales.
Identify the utility with which the facility is interconnected:
- ☒ Distributed Generation, interconnected without net metering.
Identify the utility with which the facility is interconnected: **Ohio Edison Company**

Note: if the facility does not yet have an interconnection agreement with a utility or transmission system operator, please note here the status of the application for such an agreement:

N. Meter Specifications

All facilities are required to measure output with a utility grade meter. Please provide this information for each meter used in your system.

Manufacturer: **BH-Instruments of Austria model PCS 511**

Serial Number: **50605020**

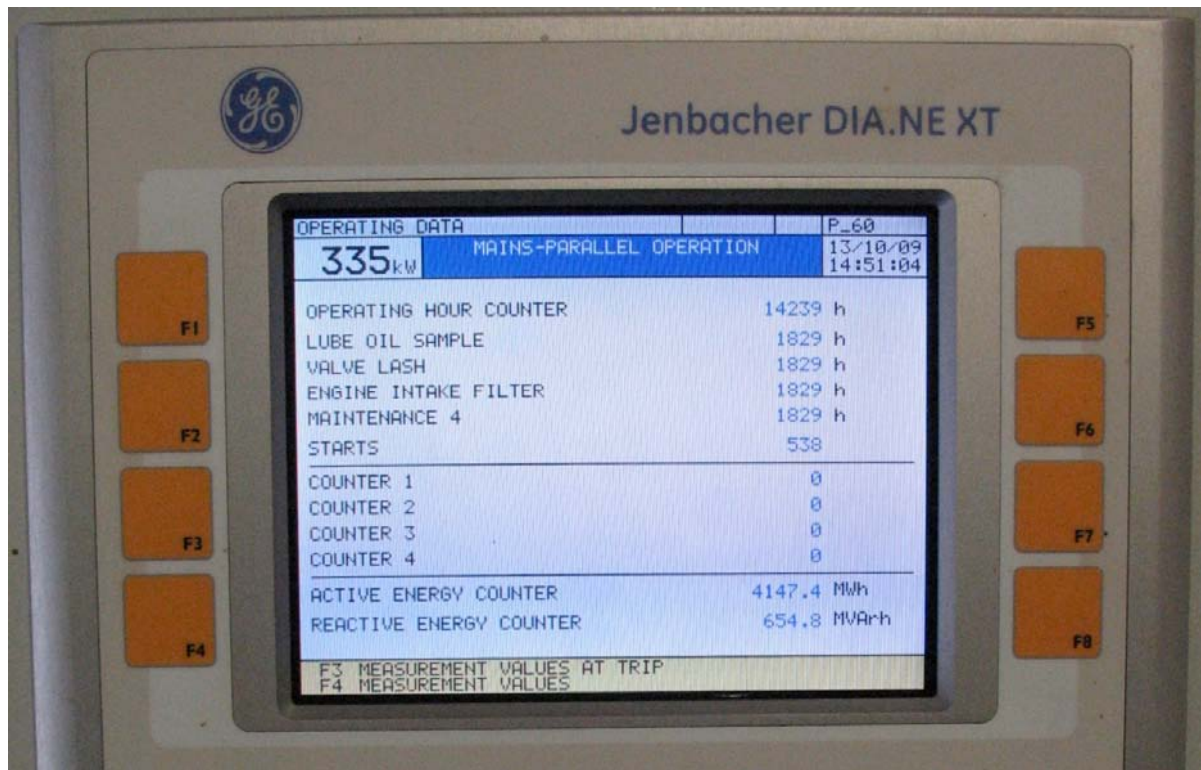
Type: **Custom metering installation**

Date of Last Certification: **Engine controller was last inspected October 6, 2009. Metering equipment is solid state design and is calibrated/verified at the manufacturer's facility.**

Description of metering: **The metering installation is comprised of PTs, CTs and an Engine/Generation Controller (EGC) manufactured by BH-Instruments of Austria. (See also Exhibit I) The EGC not only operates the generator but also meters the electrical output of the unit on an hourly basis mimicking the functionality of a stand-alone kwh meter. The metering function of the EGC shows per product literature to be Class 0,4 (means .4%) and have a meter error output of +/-1%. The EGC meets IEC specifications for measurement standards, which are similar in nature to the NEMA (ANSI) specifications.**

Total kWh shown on meter at time of photograph: **4147.4 MWh**

Attach a photograph of the meter with date image taken. The meter reading must be clearly visible in the photograph.

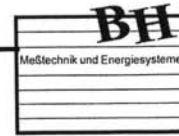


The Public Utilities Commission of Ohio reserves the right to verify the accuracy of the data reported to the tracking system and to the PUCO.

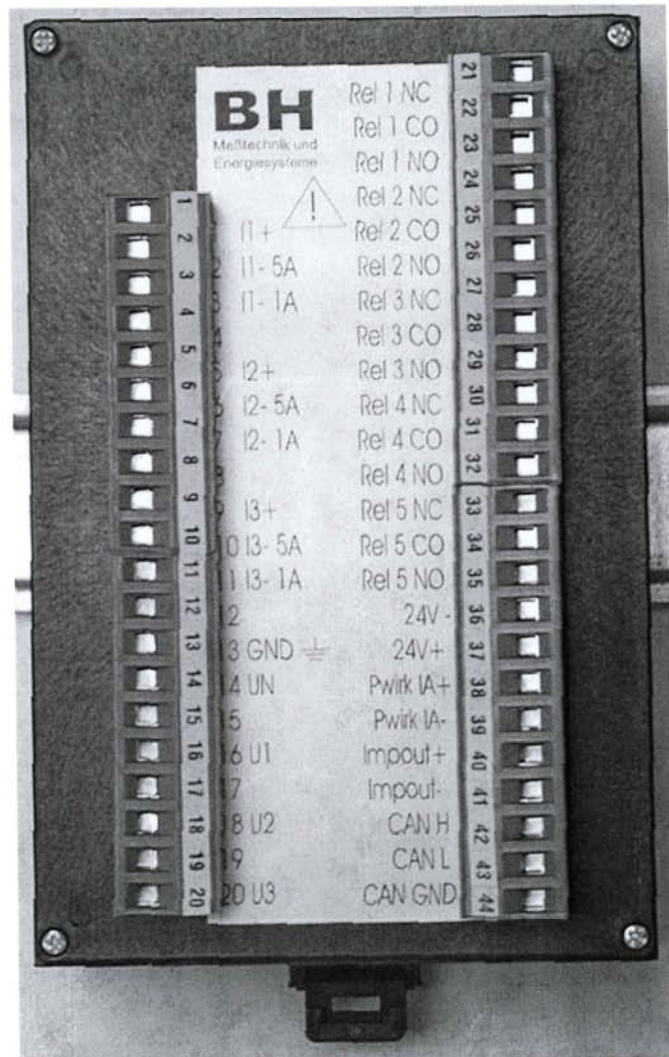
EXHIBIT I

Operating Instruction

Power Control System PCS 511 Measuring and Test Instrument for Power Quantities



1.01-0403-03 PCS 511



EC-Certificate of conformity
EG-Konformitätserklärung
CE-Certificat de conformité

Document No. / month / year
 Dokument Nr. / Monat / Jahr
 N° de document / Mois / Année

CE-511 / 04 / 2003

Manufacturer
 Hersteller
 Fabricant

B. HIRNSCHRODT Ges.m.b.H
 Messtechnik-Energiesysteme

Address
 Anschrift
 Adresse

A-2201 Gerasdorf bei Wien, Gemeindeweg 13A

Product type
 Produktart
 Type de produit

Power Control System, three phase
 Netzanalysator, 3phasig
 Analyseur du réseau, triphasé

Model name
 Produktname
 Nom de produit

PCS 511

Year of CE-marking
 Jahr der CE-Kennzeichnung
 Année du marquage CE

2003

The product meets the regulations of the following EC-directives
 Das Produkt erfüllt die Bestimmungen der folgenden EG-Richtlinien
 Le produit est conforme aux normes des directives de l'Union Européenne suivantes

73/23/EEC

„Directive on the approximation of the laws of the member states relating to electrical equipment designed for use within certain voltage limits amended by the directive 93/68/EEC”

89/336/EEC

„Directive on the approximation of the laws of the member states relating to electromagnetic compatibility amended by the directives 91/263/EEC, 92/91/EEC, 93/68/EEC and 93/97/EEC”

The accordance is proved by the observance of the following standards:

Die Übereinstimmung wird nachgewiesen durch die vollständige Einhaltung folgender Normen:
 La conformité est prouvée par le respect des normes suivantes :

Safety Sicherheit Sécurité	IEC/EN 61010-1: 1992/93 IEC/EN 61010-2-031	IEC 61010-1:1992 / IEC 1010-2-031
Emission Emissionen Émission	IEC/EN 61326-1 EN 50081-2 EN 61326-1:1997 / A1:1998	IEC/EN 61326, EN 55011 ClassB
Immunity Immission Susceptibilité	IEC/EN 61326-1/A1 EN 50082-1 EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5	Group standard Fachgruppennorm 8 kV (B) , 10V/m (A) Leitungslänge < 3m

Date / Datum / Date
 30.04.2003

Signature
 Unterschrift
 Signature



1. Use and Technical Description

The Power Control System **PCS 511** was designed for capturing and monitoring power line quantities in electric generation and distribution utilities. It unites tasks for measurement- test and protection engineering in a single device. Therefore, the range of application covers a wide field of measurement tasks in electric 3- and 4- wire AC power supply networks up to 415 V.

As outputs, an analogue active power signal, a counter for active power and five monitoring contacts are available. The additional CAN-bus Interface provides for programming the measuring parameters as well as for reading the measuring quantities (e.g. current, voltage, power, frequency, $\cos \varphi$, etc.).

Voltage, current and phase shift are measured in 2 or 3-phases, depending on the power line system. Neutral current measurement is performed via a sum-current transformer. The frequency is measured in phase L1. The microprocessor processes the input quantities and calculates the derived quantities by considering the relevant measuring parameters.

The CAN-bus interface provides for configuring of the measuring parameters, and additionally via the CAN-bus interface the processed and calculated measuring data are available.

The maximum storage for five measuring quantities records the maximum of the phase currents, the neutral current and the cumulative active power. Reset is performed via the bus protocol.

The both counters are programmed for recording the active and reactive energy from a start time point which can be defined via the bus protocol.

The analogue output (0/4-20mA) with its factory adjustable time constant (factory default frequency limit max. 35 hertz) is programmed for monitoring the active line power in the three phase system (collective active power). It mainly serves for monitoring tasks. When connected to a continuous line recorder with 0(4)-20mA-input terminals, active power can be recorded permanently.

Protective functions are observed through the five programmable relay outputs. With each relay output, one or two freely selectable limit value functions can be controlled. In the case of observation of two limit functions with one relay output, control is carried out as a logic or-operation. Setup is performed via the CAN bus protocol.

The housing is designed as 100x144mm-panel mounting case. With the additional hat rail installation kit, mounting to carrying rails after EN 50022/32mm is possible. Electric connections are performed via screw terminals at the terminal panel (UL E60425, CSA LR13631).

2. Technical Data

Inputs

Voltage

Number: 4 (UL1, UL2, UL3, UN)
 Meas. range: 100V/400V
 selectable via configuration software
 Voltage measurement:
 phase-to-earth 0...(57.7) 230...300V
 phase-to phase 0...(100) 400...520V
 Overload: max. 600 VAC
 Line
 Connection: 4-wire / 3-wire with artificial star point
 Meas. method: effective val., TRMS, AC, DIN 40110-1 and 2
 Averaging time
 Interval: 1 second
 Frequency: 45...65 Hz
 Impedance: ca. 1M Ω
 Ratio: voltage ratio programmable
 from 0,01 to 655,35
 Frequency measurement only in voltage input L1

Current

Number: 4 (IL1, IL2, IL3); Neutral current meas.
 via internal Sum-current transformer
 Current measurement:
 Meas. range 1: 0...1...1,2A
 Meas. range 2: 0...5...6A
 selectable via configuration software
 Overload: 1,2-fold
 Shock load cap. 50A 1sec
 Meas. method: effective val. RMS, AC, DIN 40110-1 and 2
 Averaging time:
 Interval: 1 second
 Frequency: 45...65 Hz
 Impedance: typisch 40 m Ω
 Ratio: current ratio programmable
 from 1 to 9999

Outputs

Analogue output

Number: 1
 Type: potential isolated from measuring input and
 Auxiliary supply
 Meas. qty.: collective power (sum-active power)
 nominal value: 0/4-20mA
 measuring range: Start and end value
 programmable in kW
 frequency limit: max. 25 Hz, time constant
 corresponds to factory setting
 burden: < 500W

Relay outputs

Number: 5
 Type: break-make, max. 50V DC/0,5A
 normally closed (idle state)
 Dielectric strength of coil 500VDC
 Function: control of one or the logical OR-operation of
 two limit functions described below
 Allocation: with configuration software via
 CAN-bus protocol

Limiting values

Over voltage
 (in one phase): limit [V]
 Under voltage
 (in one phase): limit [V]
 Over frequency: frequency [Hz]
 Under frequency: frequency [Hz]
 Voltage unbalance: in % of the maximal voltage
 difference of two phase voltages
 related to the mean value of the
 three phase voltages
 Current unbalance: in % of the mean value of the
 phase currents
 Minimum load: limit [kW]
 Reactive load: limit [kvar]
 Over current protection: limit [A]
 Neutral current: limit [A]
 Short-circuit current: response time programmable
 from 50 to 300ms,
 no phase detection
 Thermal overload: dependent from over current and
 time according to $i^2 \cdot t$ in the time
 range 0,5-10 sec.

Counter output

Number: 1
 Application: energy meter
 Type: optical coupling device, S0-compatible
 Meas. quantity: Total active energy
 Impulse duration: ca. 400ms
 Impulse transfer: transistor conductive
 Ratio: programmable via CAN-Bus protocol
 Aux. supply: 24VDC, extern

Internal counter

Number: 2
Application: energy meter
Meas. quantities: 1x Total active energy
1x Total reactive energy
Resolution: 1 Digit + 100kWh (kvarh), 32 Bit

Maximum value storage

Application: 3x Phase current
1x Neutral current
1x Total active power
Type: drag pointer,
simulated via software
reset via CAN-bus protocol

Measuring error from nominal value

Voltage: class 0,2
Current: class 0,2
Power: class 0,4
Frequency: $\pm 0,1\%$ of rdg.
Analogue output: $\pm 0,5\%$ of fsd
Meter output $\pm 1\%$
Internal meter $\pm 1\%$ at $\cos\phi = 1$ for active energy
 $\pm 1\%$ at $\cos\phi = 0$ for reactive energy

Ambient conditions

Climatic class: 3z / 55 / 75
Temperature range: operation/function: $0^{\circ}\text{C} \dots +55^{\circ}\text{C}$
storage/transport: $-25^{\circ}\text{C} \dots +75^{\circ}\text{C}$
Application: Indoor, altitude up to 2000m NN

Auxiliary supply

Voltage range 18-38VDC
Power consumption < 10 Watt
Bridging duration: typ. 100 ms at 24VDC

Interface

Type: CAN Controller
Functions: configuring, data transfer
Protocol: CAN-bus protocol

Mechanical construction

Housing: panel mounting, „Uninorm“
with hat rail adapter
Dimensions: 94 x 144 x 86
Mounting: hat rail TS35 according to
DIN EN 50022
Panel cut out: 89 x 139 $\pm 0,5$ mm
Connections: Screw terminals max. 3mm

Electrical safety

Overvoltage category: III according to EN 61010
Protection class: II
Protection type: IP 40 Gehäuse
IP 00 Anschlüsse
Nominal voltage 300 V

Test voltage 1)

Inputs \Rightarrow interface, auxiliary supply, Relais 3,7 kV
Inputs \Rightarrow housing 3,7 kV

1) homologation test (protective impedance)

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

12/2/2009 11:22:05 AM

in

Case No(s). 09-1879-EL-REN

Summary: Application Certification as an Ohio Renewable Energy Resource Generating Facility for Akron Biosolids to Energy Project Phase 1 electronically filed by Mr. Brian M Gresser on behalf of City of Akron